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[CN/US]; Celera Genomics, 45 West Gude Drive C2-4#21, Rockville, MD 20850 (US). YAN, Chun-hua [CN/US]; Celera Genomics, 45 West Gude Drive C2-4#21, Rockville, MD 20850 (US). NEELAM, Beena [GB/US]; Celera Genomics, 45 West Gude Drive C2-4#21, Rockville, MD 20850 (US).

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[Continued on next page]

(54) Title: ISOLATED HUMAN TRANSPORTER PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS, AND USES THEREOF

1. ATGGCTCTCA AGAAGAATAG AAAGCGGTTG AAACAAAGGG CGGGAAATGG  
 51. TTGGCTCTG CCTCTCTGCT CTTCCTCTTG TGCGGAGCG CGGGCTCTT  
 101. CTGCTGATC AGACTTGGG GAACTCTGGG GGAATCTGAG CGTGACCCAC  
 151. TTATGAGAA AGGATGACAA ATTTCTCTAA ATGATTCAGA ATTCCTCTAT  
 201. TCATCTCTGA CTCACACAA TGAAGCTCTG AAATATATGT ATAGCTGAC  
 251. CAGTGTCTGT TACTAGCTT AAAGGAAAGC AAAGGCTGTA TACAGCTGG  
 301. CCTATGGCAG GATTCTCTGG GGGCTGAGT AAATGGCACA  
 351. GAAAGATGCT CGGTGAGGC CGTGGATGAG AGGAAAGCT GAGTGACAA  
 401. TGGGCTCTGT GCTACAGCTT GATGAAATGG ATGGGCGCT GAGTGACAA  
 451. GATATGGAA TTTATGAAAGA AGGAAAGCT CGGTGACCTT TGAGGAAAC  
 501. AGATGGCAAG ATTGTTTAC CAGGGCACTT TCTGTTATGT ACATTCATG  
 551. GAGGACGCTA CAAGCTGCA ATGGTGGCG TGAAAGGGG AGATGGCTG  
 601. ATATTGGCGG GGGCTGAGG TGACTCTGAC ATCTGGCGG AAAGAATGGC  
 651. CTTGGACAGC TCGAGCTGG AAACAGCTAG CCTGGAGTGA TCTCTACG  
 701. TAAGGAGCTT AGATGAGGAG GATAACCGAG TCCAACTAC AAGGAGCT  
 751. CCTTATAAAC CAATTTATGA CAGAATTACA ATAAAGGCG GTGATGTTT  
 801. GCTGGATTTT ACAGACGCC CTGGAGATGG CAGTGACCTT ATGCTAGAGG  
 851. AAGTCACAGG CTTTPAAATAT ATTTTGAAT CTGCGGAGA AGGAAATGAG  
 901. CAACTTACTG AGAAAGACG AGCTGCTAAAG TTGACGATAC GAGGAAAGTG  
 951. CAATCTGAT ATTTTTTAT TTATTTCTTAA ATCAACAAAGA GTCAATTTTA  
 1001. CAAGAGATGA TAAATATCA AAAGGAGCAG AAACAGGAA CAAGAATCT  
 1051. TATGACATTA TAGGGGATTT ATGGTGGCG CTGAAAGGAA TTAGGAAAT  
 1101. ATTGGATTT CEDCTAACAC AGGGCTGACCTT TTGAGGAGT TTGAGGATC  
 1151. CTGGCCCTG AGGAGGTGTA CTTATGTTG CTCCAGCTAT TGGAAGAAC  
 1201. ATGATGCGA GGGCTGTTG TAATGAGTT GGAGGCTATG TTTCGTTAAT  
 1251. TTGGTGGCTT GAAATTTAAAC GCAATCTCA TGTGTTCTG GAGGCAAGA  
 1301. TAATGCGATG GGGCTGTTG GAGCTCTAC GAGCTCTAC ATATGCTT  
 1351. ATTGGATGC TTGTGAGCT TGTGGAGAA AGGAGGCGG CGGGCTCTG  
 1401. AGTTGAAAAA AGAGTGTGCG CTTCAGCTT AAACACTGAGG CGGGCTG  
 1451. GTTCGAGAGT AAGTGAAGGA CAAGTGTGCG TTCTGGCGG CGAGATCCG  
 1501. CCTCTGCTT GGTGCTCTC TCTGGAGAA CTGGCTCTAT TTGAAAGAA  
 1551. GATGGAGAT GGGATGCTCA ATGCTGAGT GGGCTCTAA ATGCTGAGG  
 1601. AACCTGCTG AGGGTGTCCC CATTGCTGCA CTGGAGCTCA CGTCTCTGG  
 1651. CTGGAGCTA GGGCTGCTGAG ATGCTGAGA ATGCTGAGA AACAGCTCA  
 1701. TAATGAGCA GGTCTCTGCTG CTGGAGCTG AGTCTGAGG ATCTGAGCTA  
 1751. ACCTCTGAGT GGTCTCTGCTG CTGGAGCTG AGTCTGAGT TCTGAGGAT  
 1801. TCTCTGAGG GGGCTGCTGCTG ATGCTGAGG AGTGGCTGCTG CGAGAATAGC  
 1851. ATTTGATGC CGAGCTAT CTGGCTGCA ATGAGGAGA CTGGAGATG  
 1901. TCAAGCTGCT GGTGGAGACG CTGGAGATG AGGGCTTAAAC ATGCTGAGG  
 1951. TCTCTGAGT GAGTGGCTG CTGGAGCTG AAAGGCTTGC TTCTCTATGG  
 2001. CGGGCTGGG TCTCTCTAA CAATGAGAC AGGGCTTGC CGCAATGAGA  
 2051. CTGGAGCTA TTCTCTAGCT ATAAAGGGG CTGAAATTATG GAAATATATG  
 2101. GTTGCTGAGT CTGAGAGGAG AGTCTGAGG AGCTTCCGAA AGGCAAGAGC  
 2151. AGCTGGCTCT TTCTCTTAT TTCTCTGATCA ATGCTGATCC TTAGCTGTT  
 2201. AAAGGGGGAG TTCTTCTAGT GCTGGAGATG TAGGGCTG TGTTTTGGCT  
 2251. CGCTCTTAA CAGAAATGCA TGCGGATGAA CGCTTAAAGG ATGTCAGAT  
 2301. TTGGGAGCT ACTAACCGTC CAGATGGAT AGACAAGGCT TTGATGCGG  
 2351. CTGGAGAGT TTGATGAAATC ATCTGATGCG CTTAACTGGG TGAGGAAAGC  
 2401. AGAGGGAAA TATTTAACTG CGAGTTTCAC TCTATGCTG TGAGTATGA  
 2451. AGTTGACCTG GTGTCGACTA TCTCTCAAC CGAGGCTAC TGAGGAGCG  
 2501. AGATTTGAGC TTGTCGAGA CGGGCAGCTC TTCTGGCT TGSAAAGAGAC  
 2551. ATTCAAGCGA ATTCATCAT ATGAAAGACAT TTCACTCAGG CCTTGGACAC  
 2601. TTGTGACACTT AGAATCTCTG AGTCTGAG AGCTTCTTAT GAAGGATTAC  
 2651. AACAGAAGAG TGCGCTGCTG ACACCTCTGA (SEQ ID NO:1)

The published application  
is used as the specification  
in this case.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/06670

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
IPC(7) : C07K 1/00, 14/00, 16/00, 17/00; C07H 21/04; C12Q 1/68; A01K 67/00; C12P 21/06; C12N 1/20, 15/00, US CL : 530/350, 387.1; 536/23.5; 435/6, 69.1, 252.3, 320.1, 471; 800/8 <u>According to International Patent Classification (IPC) or to both national classification and IPC</u>		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 530/350, 387.1; 536/23.5; 435/6, 69.1, 252.3, 320.1, 471; 800/8		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) MEDLINE		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/54733 A1 (HUMAN GENOME SCIENCES, INC.) 2 August 2001 (2.08.01), especially the Abstract and pages 9-20 (see attached Sequence Comparisons A and B).	1-5, 8-19
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A		20-23
Y	WO 01/54733 A1 (HUMAN GENOME SCIENCES, INC.) 02 August 2001 (02.08.01), especially pages 9-20.	6, 7
X	Database EST. Accession No. B16477. Adams, MD et al.	4, 5
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Y		8, 9
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Date of the actual completion of the international search <b>06 July 2004 (06.07.2004)</b>		Date of mailing of the international search report <b>15 SEP 2004</b>
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 872-9306		Authorized officer <b>Robert Landesman</b> Telephone No. (571) 272-1600